

Dean L. Engelhardt, et al.

Serial No.: 08/486,069

Filed: June 7, 1995

Page 2 [Sixth Supplemental Amendment (Following Applicants' May 7, 1999 Fifth Supplemental Amendment, Their May 1, 1999 Fourth Supplemental Amendment, Their March 29, 1999 Third Supplemental Amendment, Their February 2, 1999 Second Supplemental Amendment, Their July 24, 1998 Supplemental Response and Their July 6, 1998 Amendment Under 37 C.F.R. §1.116) - June 3, 1999]

PLEASE AMEND THE ABOVE-IDENTIFIED APPLICATION AS FOLLOWS:

In The Claims.

Amend claims 295, 337 and 440-442 as follows:

295. (Amended) The process according to claim 284, wherein the lectin comprises [Concanavalin] concanavalin A.

337. (Five Times Amended) A process for preparing a labeled oligo- or polynucleotide of interest, comprising the steps of:

(A) providing either:

(1) one or more chemically modified nucleotides capable of incorporating into an oligo- or polynucleotide of interest, alone or in conjunction with one or more other modified or unmodified nucleic acids selected from the group consisting of nucleotides, oligonucleotides and polynucleotides, said other modified or unmodified nucleic acids being capable of incorporating into an oligo- or polynucleotide of interest, said chemical modification comprising a label capable of providing directly or indirectly a detectable signal indicating the presence of said labeled oligo- or polynucleotide of interest, or

(2) an oligo- or polynucleotide of interest comprising one or more chemically modified nucleotides, alone or in conjunction with one or more other modified or unmodified nucleic acids selected from the group consisting of nucleotides, oligonucleotides and polynucleotides, said chemical modification comprising a label capable of providing directly or indirectly a detectable signal indicating the presence of said labeled oligo- or polynucleotide of interest,

said chemically modified nucleotides being modified on the sugar, phosphate or base moieties thereof and being selected from the group consisting of:

(i)

PM-SM-BASE-Sig

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wherein

PM is a phosphate moiety,

SM is a furanose moiety,

BASE is a pyrimidine, purine or 7-deazapurine, and

Sig is a detectable moiety, and

wherein PM is attached to the furanose moiety SM at a position selected from the group consisting of the 2', the 3' and the 5' position, or any combination thereof, BASE is attached to the 1' position of SM from the N¹ position when BASE is a pyrimidine or the N⁹ position when BASE is a purine or a 7-deazapurine, and Sig is covalently attached to BASE directly or through a linkage group at a position other than the C⁵ position when BASE is a pyrimidine, at a position other than the C⁸ position when BASE is a purine, and at a position other than the C⁷ position when BASE is a 7-deazapurine;

(ii)

Sig

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PM—SM—BASE

wherein

PM is a phosphate moiety,

SM is a furanose moiety,

BASE is a pyrimidine, purine or 7-deazapurine, and

Sig is a detectable moiety, and

wherein said PM is attached to the furanose moiety SM at a position selected from the group consisting of the 2', 3', and 5' positions, or any combination thereof, said BASE is attached to the 1' position of SM from the N¹ position when BASE is a pyrimidine or the N⁹ position when BASE is a purine or 7-deazapurine, and Sig is covalently attached to SM directly or through a linkage group; and

(iii)

Sig—PM—SM—BASE

wherein

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PM is a phosphate moiety,

SM is a furanose moiety,

BASE is a pyrimidine, purine or 7-deazapurine, and

Sig is detectable moiety; and

wherein PM is attached to the furanose moiety SM at a position selected from the group consisting of the 2', the 3' and the 5' position, or any combination thereof, BASE is attached to the 1' position of SM from the N¹ position when BASE is a pyrimidine or the N⁹ position when BASE is purine, and Sig is covalently attached to PM directly or through a linkage group; and

said oligo- or polynucleotide of interest; and

(B) either incorporating said one or more modified nucleotides (1) into said oligo- or polynucleotide, thereby preparing a labeled oligo- or polynucleotide of interest, or preparing said oligo- or polynucleotide of interest from said oligo- or polynucleotide recited in step (A)(2) above.

440. (Amended) The process according to claim 437, wherein the lectin comprises [Concanavalin] concanavalin A.

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441. (Amended) The process according to claim 438, wherein the lectin comprises [Concanavalin] concanavalin A.

442. (Amended) The process according to claim 439, wherein the lectin comprises [Concanavalin] concanavalin A.

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